A Securing Bracket For A Floor Supported Laundry Appliance

Background of the Invention:

Floor supported laundry appliances, such as washing machines and clothes dryers, experience significant vibrations during the spin and tumbling cycles of the machines. At times, these vibrations can cause the machine to skid on the floor away from its original location.

In an attempt to overcome this problem, it has been proposed to provide the supporting legs of the appliance with skid resistant and vibration dampening pads. While these pads initially provide the necessary skid resistance and vibration dampening, they soon become deteriorated and have to be replaced.

It has also been proposed to connect the appliance to a bracket which, in turn, is connected to the floor or adjacent wall. While this arrangement prevents the appliance from skidding, there is no provision for vibration dampening resulting in the floor or wall eventually cracking; thus releasing the bracket secured thereto.

After considerable research and experimentation, the securing bracket of the present invention has been developed which not only prevents skidding of the appliance on the floor but also dampens the vibration transmitted to the securing bracket.

Summary of the Invention:

The laundry appliance securing bracket of the present invention comprises an angle iron positioned on the floor adjacent to the rear of the appliance to be secured. A pair of channel members is adjustably mounted on the base of the angle iron and a pair of transversely extending spring biased J-bars is slidably mounted in the side walls of the channel members. The free end of each J-bar is provided with a hook portion for

engaging the rear legs of the appliance. A lag screw extends through an enlarged opening in the vertical arm of the angle iron and is secured into a wall behind the appliance. A latch assembly is pivotally connected to the angle iron arm and is adapted to engage the stem of the lag screw adjacent the screw head to thereby detachably fasten the angle iron to the wall.

By this construction and arrangement, the J-bars not only prevent the appliance from skidding, but they also absorb the vibration of the machine to thereby prevent vibrations from being transmitted to the angle iron and its fixation to the wall. The latch assembly also facilitates the disconnection of the appliance from the wall for repairs or replacement.

Brief Description of the Drawings:

Figure 1 is a side elevation of the securing bracket of the present invention connecting a laundry appliance to an adjacent wall;

Figure 2 is a top plan view of the securing bracket and appliance as shown in Figure 1.

Figure 3 is an exploded perspective view of the securing bracket of the present invention;

Figure 4 is a side elevational view of the securing bracket;

Figure 5 is a top plan view of the securing bracket;

Figure 6 is a front elevational view, partly in section, showing the vertical arm of the angle iron and associated latching members;

Figure 7 is a view taken along line VII-VII of Figure 5.

Description of the Preferred Embodiment:

Referring to the drawings and more particularly to Figs. 1 and 2, the securing bracket 1 of the present invention is positioned on the floor 2 between the rear of a laundry appliance 3, such as a washing machine or dryer, and a wall 4, the bracket being connected to the rear legs 3a of the appliance 3 and the wall 4, to be described more fully hereafter.

The details of the construction of the bracket 3 are illustrated in Figs. 3, 4 and 5, wherein an angle iron 5 is provided having a base portion 5a and a vertical arm 5b. The base portion 5a is provided with a pair of longitudinally spaced slots 5c upon which channel members 6 are positioned and secured thereon by carriage bolts 7 extending upwardly through the slots 5c and square holes 6a provided in the base or web of the channels 6, the channels 6 being secured in place by lock washer-nuts 7a threaded onto the bolts 7.

Each of the channels 6 is provided with a J-bar assembly 8 comprising a bolt portion 8a extending through a tube 8b positioned within the channel 6 between the vertical walls 6b of the channel 6 and aligned with apertures 6c provided in the channel walls 6b. The end of the bolt portion 8a is threaded as at 8c upon which a bushing 8d is mounted and a lock nut 8e is threaded. By this construction and arrangement, the bolt portion 8a is slidably mounted in the tube 8b. A coil spring 8f is mounted on the bolt portion 8a coaxial therewith and is biased between the exterior surface of the channel side wall 6b and a plate 8g having a pair of apertures 8h and 8i for slidably receiving the bolt portion 8a and the threaded end 8j of the hook portion of the J-bar8, respectively. The plate 8g is secured to the J-bar 8 by a lock nut 8k threaded onto the end portion 8j.

As will be seen in Figs. 1, 3, 6 and 7, the angle iron 5 is detachably secured to an adjacent wall 4 by means of a pair of lag screws 9 extending through elongated vertical slots 5d provided in the vertical wall 5b of the angle iron 5, and into the wall 4. The vertical slots 5d communicate with enlarged openings 5e in the base portion 5a of the angle iron 5.

A latch assembly 10 cooperates with the lag screws 9 for releasably securing the angle iron 5 to the wall 4 and comprises a pair of latch plates 10a pivotally connected, as at 10b, to the angle iron vertical wall 5b. Each latch plate 10a is provided with an arcuate slot 10c at each end thereof for receiving the stem portions of the screws 9. By this construction and arrangement, the latch plates 10a can be pivoted in one direction to release the latch plates 10a from the lag screws 9 and in the opposite direction to connect the latch plates 10a to the screws 9.

Tool receiving apertures 10d are provided in the latch plates 10a adapted to receive the hooked end of a tool, such as a length of wire (not shown), which is inserted downwardly in the space between the back of the appliance 3 and wall 4, whereby the latch plates 10a can be pivoted from a remote location.

The angle iron vertical wall 5b is provided with a tab 5f having an aperture 5g adapted to receive the hook portion of a tool (not shown), whereby the angle iron 5 and associated latch assembly 10 can be lifted off the screws 9 wherein the screw stems and heads pass through the slots 5d in the angle iron vertical wall 5b and the apertures 5e in the angle iron base 5a, whereby the securing bracket 1 is disconnected from the wall 4.

To secure the appliance 3 to the wall 4, the angle iron 5 is secured to the wall 4 by inserting the lag screws 9 through the slots 5d in the angle iron vertical wall 5b. The channels 6 and associated J-bar assemblies 8 are slid on the angle iron base portion 5a to position them for proper alignment with the two rear legs 3a of the appliance 3. The hook portions of the J-bars 8 are positioned around the appliance legs 3a and the plates 8g are then secured to the ends of the J-bars 8 by the lock nuts 8k.

During the operation of the appliance 3, vibrations therefrom are transmitted to the J-bar assemblies slidably mounted in the channels 6 and absorbed by the springs 8f.

From the above description, it will be appreciated by those skilled in the art that the securing bracket 1 of the present invention is an improvement over heretofore employed skid resistant and vibration dampening pads and other securing brackets.

It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to, without departing from, the spirit of the invention or scope of the subjoined claims.